

EFP Series Sewage & Drainage Pump User Manual

1. Handling

The pump must be lifted and handled carefully by means of the handle and the lifting holes.

2. Design

The pump is available for the transfer of clean, polluted and turbid liquids, which contain suspended materials that do not exceed the following dimensions. Its most common uses are as follows: It can be used for draining domestic waste water collectors, rain water collectors, in flooded environments, and in the excavations and pits of the construction industry (EFP 26 DV or EFP 26 DT may be used). Vortex pallet models are also suitable for the transfer of liquids that contain suspended filament materials.

3. Usage Limits



EN 60335-2-41 standard prohibits using the pump in tanks or swimming pools that contain people, and obligates the use of the versions with a 10m cable for outdoor use.

Pump working conditions are not corresponded these fluid properties;

- Fluid is over 35°C temperature, over 1000 kg/m³ density, over 1mm²/s kinematic viscosity
- Chemicals that may be harmful to the pump material and fluids containing solids larger than the pump permeability described in the table given.
- Flammable and/or explosive fluids
- Other than these, potentially harmful substances and fluids

Note: The pumps must be submerged until the minimum submersion depth.

PUMP TYPE	FLUID TYPE	Suspended Solids		Submersion Depth (mm)
		Quantity (%)	Dimension (mm)	
EFP 11 DP	Clean Water / Waste Water	< 10	< 10	300
EFP 11 D	Clean Water	< 5	< 6	300
EFP 11 DV	Clean Water / Waste Water	< 10	< 35	320
EFP 22 DP	Clean Water	< 8	< 6	260
EFP 22 D	Clean Water / Waste Water	< 20	< 15	260
EFP 26 DV	Clean Water / Waste Water	< 30	< 35	390
EFP 26 DT	Clean Water / Waste Water	< 40	< 40	385

4. Electrical Connection

The pumps must be used with an ETNA Hydropan electrical panel.

5. Control of the Direction of Rotation

The correct direction of rotation is clockwise when looking at the pump from above. Observe and check the pump performance. With the correct direction of rotation, high Q/H performance is ensured with single channel and double channel versions, and a low absorption rate is provided with vortex wheeled versions.

6. Maintenance



Please make sure that you power off if any maintenance is required on the pump and call an expert for the maintenance operation.

The pump does not require any routine maintenance. Cleaning the suction filter (EFP 22D, EFP 26DV) or the wheel may be required. Remove the screws that hold the filters to access the wheel on the models with filters.

7. Safety Information

- The pump is not suitable for pumping flammable or dangerous liquids.
- Do not use the energy cable to carry or lift your pump.
- Do not run the pump dry (out of the water).
- Since the pump runs and stops automatically, do not put your hands or other objects in between when it is connected to the mains.
- Pay attention to the limitations of use. Inappropriate use may damage the pump or people.
- Ensure that the network voltage conforms to the value on the label.
- If the pump is three-phase, have the connections to the electric grid and the earthing socket conducted by an expert (authorized electrician).
- Use a sensitive phase relay (0.03A) as extra protection against electric shocks.
- Restrict the access of individuals, who are not authorized to maintain the pump.
- Use the pump within the usage limits defined on the label.
- Protect the pump against freezing.
- Protect the pump against potential blockages.
- We recommend that you wear gloves during any action conducted on the pump.

8. Troubleshooting

The motor starts running but the pump does not transfer: Make sure that water level is not very low and the suction nozzle or the discharge pipe is not clogged.

If the transfer of the pump is reduced: Check for blockages and check the accuracy of the rotation direction on the three-phase models.

If the pump runs intermittently:

- The floater switch adjusted wrong.
- The container of the pump is very small.
- The current withdrawn from the electrical panel is high.
- The pump or the pipes are clogged.

9. Noise

If the pump runs partially under water, the noise level should be less than 70 db(A), but this value is not applicable when the pump runs completely under water.

10. Installation

The inner diameters and the sizes of the pipes should allow flow. The water speed should be higher than 0.8-1m/sec in horizontal pipes, 1.6.m/sec in case of sand and floating substances and higher than 2.5m/sec in vertical pipes to prevent any possible blockage. The discharge pipe should never be smaller than the pump discharge diameter. The vertical pipe sections should be limited and the horizontal pipe sections should be slightly inclined in the direction of the flow to prevent any deposit that may cause the pump to stop.

The pump should be held from its handling ring while being lifted or moved, and never be lifted from its cables since this may damage the pump. (Figure 1) The maximum immersion dept (including the cable) should be 5m for EFP 11 and 10m for EFP 22 and EFP26.

Fixed Installation with Sledge (Figure 2)

- Fix the bottom section of the sledge to the tank base as shown.
- Cut two 3/4" stainless pipes according to the distance between the top section of the sledge and the fixed section of the sledge and install (Figure 4, Figure 5).
- Mount the pump sledge flange and the connection parts (Figure 6). Attach a chain or a rope to the handling ring of the pump, slide the pump downwards from the sledge and place it on the bottom part of the sledge.
- Connect the check valve and the valve to the horizontal section in order to facilitate access to the discharge pipe.
- This will enable pump maintenance while keeping the discharge pipe connected to the installation

Mobile Installation (Figure 3)

- Prefer a chain or a rope that will not rot, and connect it to the handling ring of the pump. Always use a chain or a rope to lower, lift or move the pump if you have a plastic or flexible discharge pipe. Never pull out from the power cable because it will damage the pump. Connect the power cable to the lifting chain or the rope using proper connectors. Leave a sufficient space for the cable to move since there will be extra weight when the pump runs in case of a flexible discharge pipe.

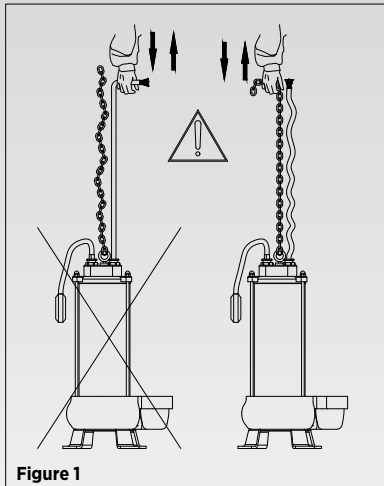


Figure 1

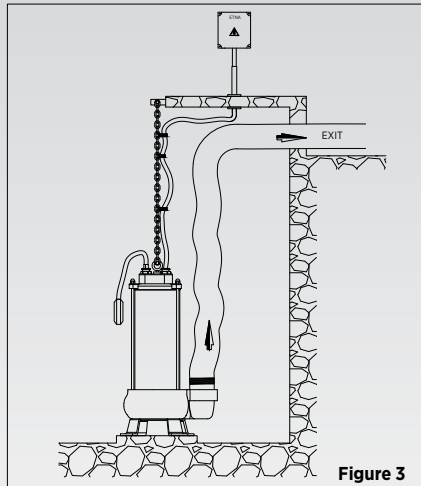


Figure 3

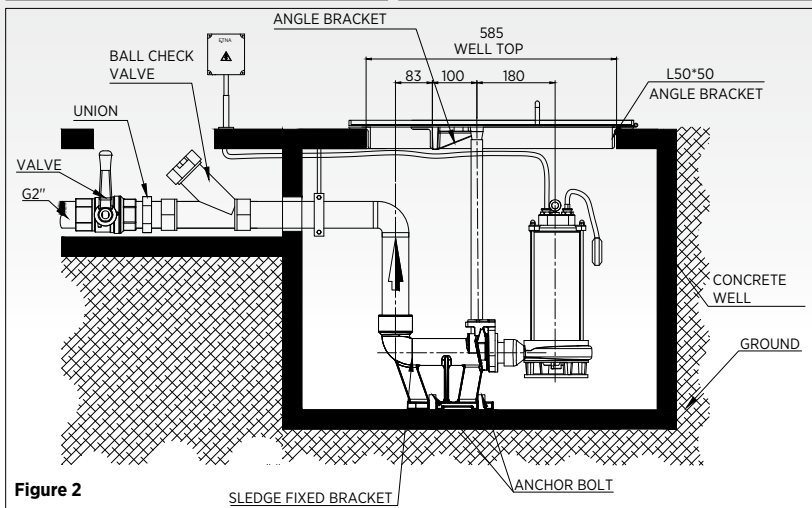
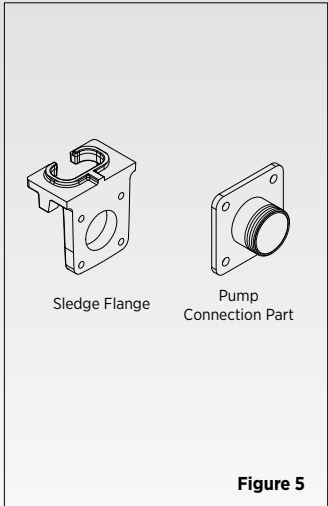
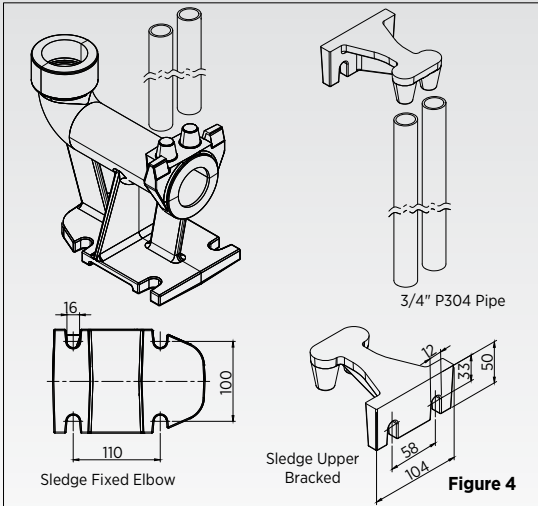


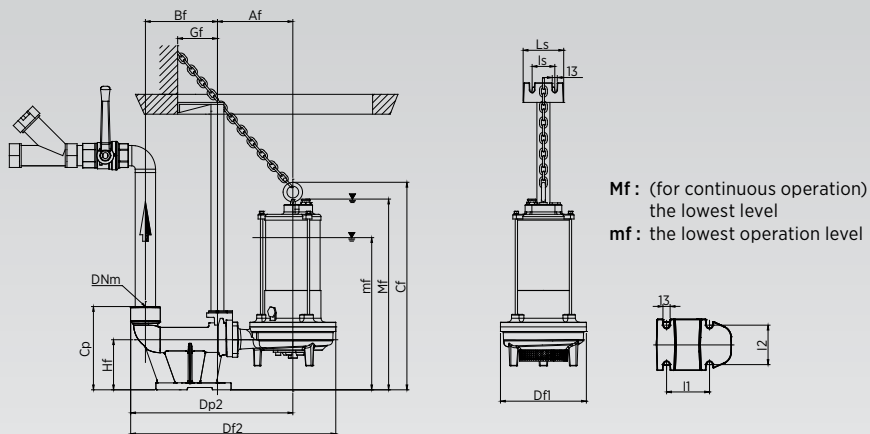
Figure 2

Immersion Sledge Installation

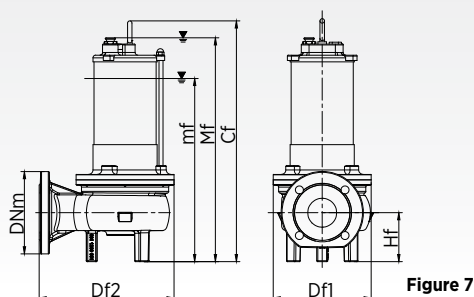
- The immersion sledge is a fitting that provides ease of installation and maintenance in cases where the pump is required to run on a fixed point. As seen on Figure 12 and Figure 13, thanks to its sledge system, the pump is easily suspended into a well using a chain through its stainless steel guide pipes and when it is directly across from the flange located at the bottom of the sledge, it sits onto the discharge flange, and is ready for operation. Discharge of the chamber, where the pump is located, is not required during this process. When maintenance for the pump is desired to be carried out, the pump is pulled up using a chain, cleaned by spraying clean water with a hose, easily taken out, and its maintenance is carried out. The pump is lowered back into the well on the sledge after maintenance and will be easily made ready for operation. It is recommended to use a strong chain when suspending the pump down on the sledge.



MODEL	Connection Diameter	Suitable Pump Model	Figure No
Sledge System Mounting Kit	G2"	EFP 11 DP - EFP 11 D	5 -6
Sledge System Mounting Kit	G2"	EFP 22 DP - EFP 22 D	5

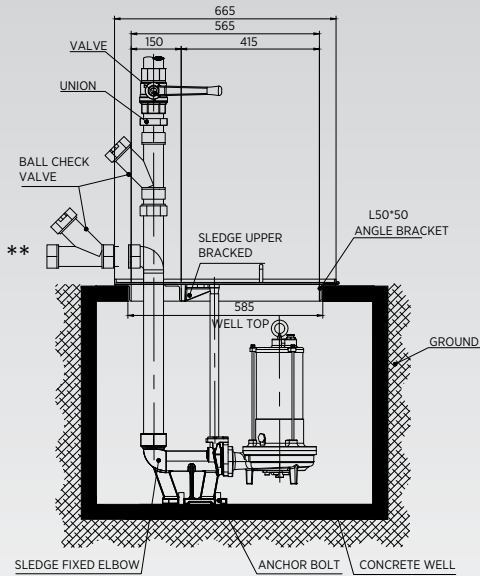
EFP 11 DP - EFP 11 D - EFP 22 DP and EFP 22 D Assembly Scheme

Figure 6

TYPE	DIMENSIONS (mm)																
	Af	Bf	Cf	Cp	Df1	Df2	Dp2	DNt	Gf	Hf	I1	I2	Is	Ls	mf	Mf	DNm
EFP 11 DP	180	185	490	210	167	487	400	3/4"	100	130	110	100	58	104	390	465	2"
EFP 11 D																	
EFP 22 DP	195		462		220	530	410								320	420	50
EFP 22 D																	

EFP 11 DV - EFP 26 DT and EFP 26 DV Assembly Scheme

Figure 7

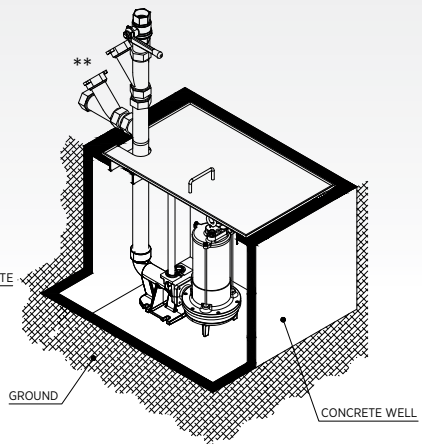
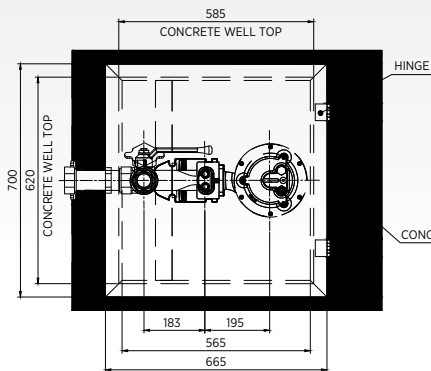
TYPE	DIMENSIONS (mm)						
	Cf	Df1	Df2	Hf	mf	Mf	DNm
EFP 11 DV	450	200	253	120	320	425	2"
EFP 26 DT	546	220	300	110	403	503	65
EFP 26 DV							

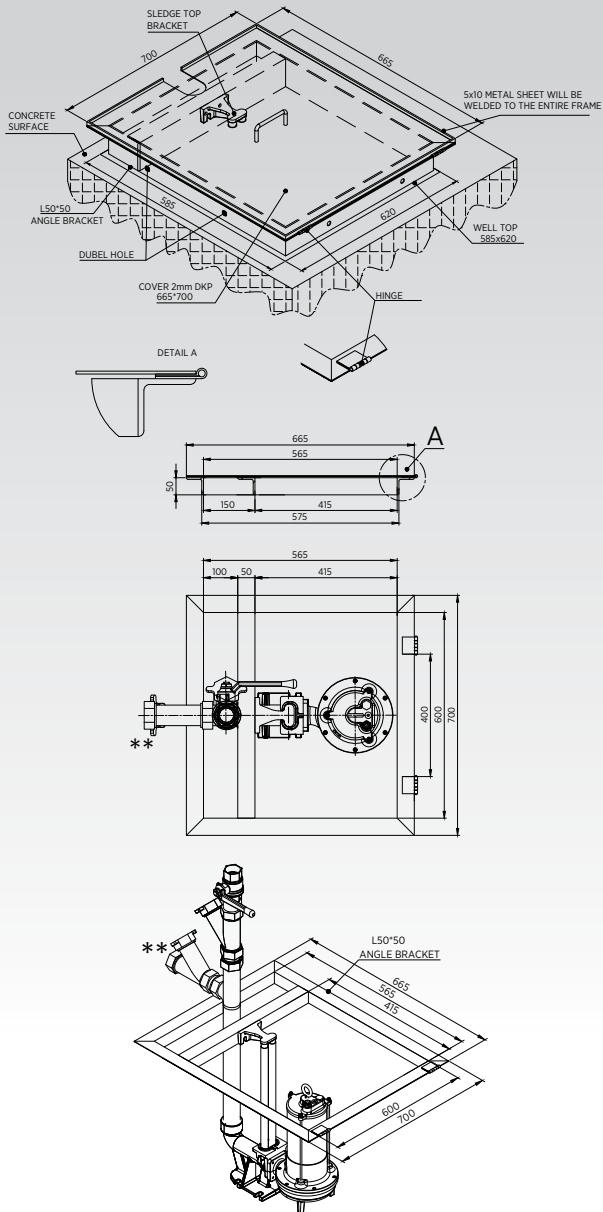
Concrete Septic Tank and Waste Water - Drainage Pump Installation Details with Sledge System



NOTE: Concrete well can be in the desired size. However, the well top should be 620x585 so that the sledge well cover supplied by our firm can be mounted. Cover chassis is fitted into the well top, and doweled from inside.

**** Alternative connection**







NOTE

[illegible]

NOTE



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